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IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re Application of:) Art Unit: 1633
)
BRO, et al.) Examiner: LEAVITT, M.
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Serial No.: 10/536,495) Washington, D.C.
)
Filed: May 10, 2006) December 13, 2007
)
For: METABOLICALLY ENGINEERED) Docket No.: BRO=2
MICRO-ORGANISMS HAVING)
REDUCED PRODUCTION...) Confirmation No.: 6559

ELECTION WITH TRAVERSE

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S i r :

In response to the restriction requirement mailed November 14, 2007, Applicants respond as follows:

1. Applicants elect group I, with traverse.
2. In response to the species restriction #1, applicants elect the species *Saccharomyces cerevisiae*. In response to #2, we elect the desired product ethanol. In response to #3, we elect the undesired product glycerol. All of these elections are with traverse.

3. As the Examiner concedes, the PCT unity rules apply to this case. The Examiner alleges that there is no special technical feature linking Groups I and II and he bases this conclusion on Bianchi et al.

Bianchi was given the Category Code A in the International Search Report indicating that it is only of background relevance. Thus, in the opinion of the ISA/EP, it does not anticipate or render obvious the claims and hence does not deprive them of a unifying special technical feature. While that decision is not binding on USPTO, it is entitled to consideration.

The Examiner has identified as a potential special technical

feature linking Groups I and II the fact that the claims all relate to compositions and methods comprising metabolically engineered micro-organisms that have been transformed with heterologous genes encoding enzymes to optimize the yield of fermentation products by reducing or eliminating the formation of by-products. The Examiner goes on to find that Bianchi et al discloses efficient fermentation by *Kluyveromyces lactis* strains effective in Pyruvate utilization and transformed with heterologous LDH gene resulting in high yield of lactic acid per gram of glucose consumed. In our opinion, Bianchi's alleged disclosure of this feature is irrelevant to the unity issue.

The special technical feature which actually links the claims of Groups I and II is that the claimed metabolically engineered micro-organism is a yeast having a "second metabolic pathway characterized by an enzyme activity in excess of a native level in respect of a "third" enzyme catalyzing a non-reversible reaction in which NADP is a co-factor and NADPH is a product". This feature leads to the optimization of the yield of fermentation products by reducing or eliminating the formation of by-products but is neither disclosed nor hinted at in Bianchi et al. The microorganism is claimed per se in the Group I claims and is used in the method of the Group II claims.

In considering whether there is a unifying special technical feature, the Examiner must consider all limitations (and indeed, all combinations of limitations) which are commonly recited, either directly or by virtue of claim dependency. Here, the Examiner has failed to address the actual special technical feature linking the claims and instead has "knocked down a straw man". The Examiner has failed to show that Bianchi discloses or suggests the feature upon which applicant relies for unity.

The Examiner's reasoning in no way demonstrates that the International Search Authority was incorrect in thinking that the claims all related to the same invention under PCT rules.

The considerations set forth in the paragraph bridging pages 3-4 are not relevant to the issue of whether there is unity under PCT rules. We assume they are recited because the USPTO will not restrict, even if there is a lack of PCT unity, if the failure to restrict wouldn't impose a "serious burden" on the Examiner. See MPEP 803(I)(B)¹.

It is relevant to the issue of "serious burden" whether the inventions are separately classified and searched, see MPEP 808.02. However, the Examiner has failed to make a showing, e.g., by citation of US class/subclass, that the inventions are separately classified. Moreover, the USPTO has the benefit of the international search on both groups.

It is irrelevant to the issue of "serious burden" that the product of I might have a use other than that of II.

4. We also remind the Examiner that if the claims of elected group I are deemed allowable, method-of-use claims of group II should be rejoined in accordance with MPEP 821.04.

5. We traverse the species restriction on the ground that generic claims are allowable.

With regard to restriction #1, group I claims 1-9 and 13 are generic to the choice of species, and claims 10-12 read upon the elected species. Hence, all group I claims (1-13) should be examined.

If the group II claims are rejoined, claims 14-16 are all generic to the elected species for species restriction requirement #1.

Species restriction requirements #2 and #3 are applicable only to group II claims. If group II is rejoined, then for both species restrictions, #2 and #3, claim 14 is generic to, and

¹ While MPEP chapter 800 defines domestic restriction practice, when domestic practice is more favorable to an applicant than PCT practice, it becomes relevant by virtue of PCT Treaty Article 27(1) and (4).

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claims 15-16 read upon, the elected species.

Respectfully submitted,

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